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(54) Abrasive resistant white cast iron

(57) A white cast iron having toughness, high tensile strength and abrasion resistance containing 0.1% to 4.0% boron in an iron-carbon alloy with the carbides in the form of globules and of an average size less than 4 microns. This white cast iron is produced by incorporating the boron in the composition to form a melt, super cooling the melt while liquid to at least 5°F below the equilibrium solidification temperature between 2200°F to 2400°F and then solidifying the melt to produce the globules of carbides uniformly dispersed and having a size much smaller than the size of the carbide particles of conventional cast iron.